CLAIMS

1. A composition for permanent dyeing of keratinous fibres, comprising at least one dye precursor, at least one alkaline agent, and at least one oxidizing compound, characterized in that it further comprises:

a protein hydrolyzate,

a quaternized copolymer of di-methylallyl ammonium and acrylic acid,

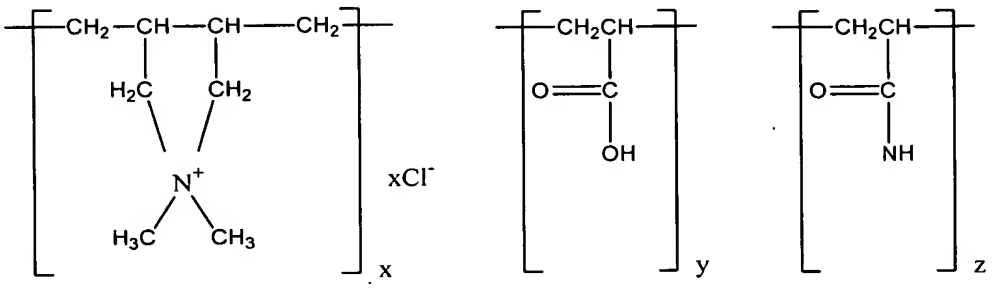
a N-methyl triethanolamine methylsulphate di-alkyl ester, and

a di-alkyl carbonate.

2. A composition according to claim 1, characterized in that the protein hydrolyzate, the quaternized copolymer of dimethylallyl ammonium and acrylic acid, the N-methyl triethanolamine methylsulphate di-alkyl ester and the di-alkyl carbonate form a quaternary associative complex within the composition.

3. A composition according to anyone of claims 1 and 2, characterized in that the protein hydrolyzate is a sericin hydrolyzate.

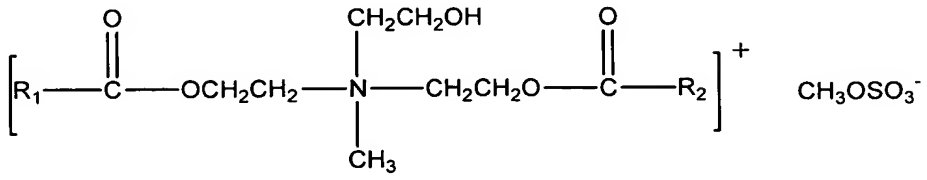
4. A composition according to anyone of preceding claims, characterized in that the quaternized copolymer of di-methylallyl ammonium and acrylic acid meets the following formula I:



wherein x ranges from 1 to 1,000, preferably from 1 to 100, and y and z independently range from 0 to 1,000, preferably from 0 to 100.

5. A composition according to anyone of claims 1 to 4, characterized in that the quaternized copolymer of di-methylallyl ammonium and acrylic acid is a polyquaternium, preferably a polyquaternium 22.

6. A composition according to any of preceding claims, characterized in that the N methyl triethanolamine methylsulphate di-alkyl ester meets the following formula II:

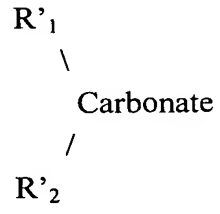


wherein R_1 and R_2 are C_n alkyl or alkenyl groups, wherein n ranges from 1 to 100, preferably from 6 to 20.

7. A composition according to claim 6, characterized in that R_1 and R_2 are selected amongst caproyl, caprylyl, capryl, lauryl, myristyl, cetyl, stearyl, arachidyl, behenyl, caproleyl, lauroleyl, myristoleyl, palmitolyl, oleyl, linoleyl, linolenyl, arachidonyl et erucyl groups.

8. A composition according to any of claims 1 to 7, characterized in that the N-methyl triethanolamine methylsulphate di-alkyl ester is a N-methyl triethanolamine methylsulphate dicocoyl ester.

9. A composition according to any one of preceding claims, characterized in that the di-alkyl carbonate meets the following formula III :



wherein R'_1 and R'_2 are C_n, straight or branched, alkyl or alkenyl, where n ranges from 1 to 100, preferably from 6 to 20.

10. A composition according to claim 9, characterized in that R'_1 and R'_2 are selected amongst caproyl, capryilyl, capryl, lauryl, myristyl, cetyl, stearyl, arachidyl, behenyl, caproleyl, lauroleyl, myristoleyl, palmitoleyl, oleyl, linoleyl, linolenyl, arachidonyl et erucyl groups.

11. A composition according to claim 10, characterized in that the di-alkyl carbonate is di-caprilyl carbonate.

12. A composition according to anyone of claims 1 to 11, characterized in that the oxidizing compound is hydrogen peroxide.

13. A composition according to anyone of claims 1 to 12, characterized in that the alkaline agent(s) is/are selected from the group consisting of aminomethylpropanol, monoethanolamine, diethanolamine, triethanolamine, ammonia and the mixtures thereof.

14. A composition according to anyone of the preceding claims, characterized in that the dye precursors are selected amongst aromatic diamines, aminophenols and phenols.

15. A composition according to claim 14, characterized in that the dye precursors are selected amongst para-phenylene diamine (pPD), ortho-aminophenol (oAP), para-methylamino phenol (pMAP), para-amino phenol (pAP), para-toluene diamine (pTD), N-phenyl paraphenylene diamine (NpPD), meta-aminophenol (mPD), resorcinol (R), 1-naphthol(1-N), meta-phenylene diamine (mPD), para-amino ortho-cresol (pAOC), 1,5-dihydroxynaphthalene (1,5-DHN) and/or 2,7 dihydroxynaphtalene (2,7-DHN).

16. A composition according to anyone of preceding claims, characterized in that its pH ranges from 7 to 11, preferably from 8.5 to 10.5.

17. A composition according to anyone of preceding claims, characterized in that the protein hydrolyzate represents from 0.1 to 10%, more preferably from 1 to 5% in weight based on the total weight of the composition.

18. A composition according to anyone of preceding claims, characterized in that the quaternized copolymer of di-methylallyl ammonium and acrylic acid represents from 0.1 to 1.5%, more preferably from 0.5 to 1%, in weight based on the total weight of the composition.

19. A composition according to anyone of preceding claims, characterized in that N-methyl triethanolamine methylsulphate di-alkyl ester represents from 0.1 to 5%, more preferably from 0.5 to 2%, in weight based on the total weight of the composition.

20. A composition according to anyone of preceding claims, characterized in that the di-alkyl carbonate represents from 0.02 to 2.5%, preferably from 0.1 to 1% in weight of the total weight of the composition.

21. A composition according to any of preceding claims, characterized in that the oxidizing compound(s) represent(s) from 0.75 to 6%, preferably from 3 to 4.5% in weight, based on the total weight of the composition.

22. A composition according to anyone of preceding claims, characterized in that the alkaline agent(s) represent(s) from 1 to 30%, preferably from 1 to 4% in weight based on the total weight of the composition.

23. A composition according to anyone of preceding claims, characterized in that the dye precursor(s) represent(s) from 0.5 to 10%, preferably from 1 to 2.5% in weight based on total weight of the composition.

24. A composition according to anyone of preceding claims, characterized in that it comprises:

- from 0.1 to 10% in weight of a protein hydrolyzate, preferaby a sericin hydrolyzate,
- from 0.1 to 1.5% in weight of a quaternized copolymer of dimethylallyl ammonium and acrylic acid,
- from 0.1 to 5% in weight of N-methyl triethanolamine methylsulphate di-alkyl ester,
- from 0.02 to 2,5% in weight of di-alkyl carbonate,
- from 0.75 to 6% in weight of at least one oxidizing compound,
- from 0.5 to 10% in weight of at least one dye precursor, and
- a sufficient amount of at least one alkaline agent for reaching a pH ranging from 7 to 11, preferably from 8.5 to 10.5.

25. A composition according to anyone of preceding claims, characterized in that it comprises:

- from 1 to 5% in weight of a protein hydrolyzate, preferably a sericin hydrolyzate,
- from 0.5 to 1% in weight of a quaternized copolymer of dimethylallyl ammonium and acrylic acid,
- from 0.5 to 2% in weight of N-methyl triethanolamine methylsulphate di-alkyl ester,
- from 0,1 to 1% in weight of di-alkyl carbonate,
- from 3 to 4.5% in weight of at least one oxidizing compound,

- from 1 to 2.5% in weight of at least one dye precursor, and
- a sufficient amount of at least one alkaline agent for reaching a pH ranging from 7 to 11, preferably from 8.5 to 10.5.

26. A composition according to anyone of preceding claims, characterized in that it comprises adjuvants selected amongst naturally occurring or synthetic fatty acids, naturally occurring or synthetic fatty alcohols, either oxyethylenated or polyglycerolated, mineral or vegetable oils, antioxidizing agents, sequestering agents.

27. A composition according to claim 26, characterized in that the fatty acids represent from 1 to 20%, preferably from 5 to 15% in weight based on the total weight of the composition.

28. A composition according to claim 26, characterized in that the fatty acids represent from 1 to 25%, preferably from 5 to 20% in weight based on the total weight of the composition.

29. A composition according to anyone of preceding claims, characterized in that it is in the form of a cream or a gel, preferably in the form of a cream.

30. A quaternary associative complex for dyeing keratinous fibres, characterized in that it comprises:

- a protein hydrolyzate, preferably a sericin hydrolyzate,
- a quaternized copolymer of di-methylallyl ammonium and acrylic acid,
- a N-methyl triethanolamine methylsulphate di-alkyl ester, and
- a di-alkyl carbonate.

31. A base, having the form of a gel or a cream, for preparing a composition according to anyone of claims 1 to 29, characterized in that it comprises:

- a protein hydrolyzate, preferably a sericin hydrolyzate,
- a quaternized copolymer of di-methylallyl ammonium and acrylic acid,
- a N-methyl triethanolamine methylsulphate di-alkyl ester, and
- a di-alkyl carbonate.
- at least one dye precursor, and
- at least one alkaline agent.

32. A method for revealing the composition dye according to anyone of claims 1 to 29, characterized in that it comprises a step involving mixing the base such as defined in claim 31 with a solution comprising at least one oxidizing compound, preferably hydrogen peroxide.

33. A method according to claim 32, characterized in that the oxidizing compound(s) represent(s) from 1.5 to 12%, preferably from 6 to 9%, in weight based on the weight of said solution.

34. A method according to claim 32 or 33 characterized in that said base and said solution are mixed in a 1/1 weight ratio.

35. A method for dyeing keratinous fibres, preferably hair, comprising the following steps of:

- applying onto said fibres a composition according to anyone of claims 1 to 29, for a period of time sufficient for obtaining the desired colouring, preferably from 10 to 45 minutes, more preferably in the order of 30 minutes,
- rinsing and drying of the fibres.